

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2003-256746

(43)Date of publication of application : 12.09.2003

(51)Int.Cl. G06F 17/60
B42D 15/10
G06K 17/00
G06K 19/00
G06K 19/10
G06T 1/00
G06T 7/00
G07F 7/12
H04L 9/32

(21)Application number : 2002-052670

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(22)Date of filing : 28.02.2002

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(54) TRANSACTION PROCESSING DEVICE, TRANSACTION PROCESSING SYSTEM, AND TRANSACTION PROCESSING METHOD

(57)Abstract:

PROBLEM TO BE SOLVED: To prevent an illegal use of a credit card more effectively than in a conventional method.
SOLUTION: A CAT (credit authorization terminal) 1 is provided with a card reader part 9 reading face image data from the card, a face feature point extraction part 14 for extracting feature points from the face image data read by the card reader part 9 as feature point data, a communication circuit 13 for sending the feature point data extracted by the face feature point extraction part 14 to a host computer 3, and a display part 10 for displaying the face image data read by the card reader part 9 and results of certification sent from the host computer 3.



LEGAL STATUS

[Date of request for examination]

15.11.2004

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of

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CLAIMS

[Claim(s)]

[Claim 1] The display of the face image data read by reading means read face image data in a card, focus extract means extract the focus as focus data from the face image data read by the aforementioned reading means, transmitting means transmit the focus data extracted by said focus extract means to center equipment, and the aforementioned reading means, and the dealings processor equipped with a display means display the authentication result transmitted from said center equipment.

[Claim 2] A reading means to read face image data in a card, and a focus extract means to extract the focus from the face image data read by the aforementioned reading means as focus data, A transmitting means to transmit the focus data extracted by said focus extract means, The display of the face image data read by the aforementioned reading means, and a display means to display the authentication result based on said focus data, center equipment equipped with an authentication means by which it is transmitted and said focus data attest based on said transmitted focus data from a preparation ***** processor and said dealings processor -- since -- the becoming transaction processing system.

[Claim 3] The transaction processing system according to claim 2 with which use of said card judges the judgment of being use by the registered user on the basis of a fixed threshold.

[Claim 4] The dealings art which reads face image data in a card, extracts the focus from face image data, and displays the authentication result which transmitted the extracted focus to center equipment and was transmitted from a face image and center equipment based on face image data.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the dealings processing technique of preventing the unauthorized use of a credit card.

[0002]

[Description of the Prior Art] Even if a credit card (it is called a "card" unless it refuses especially the following.) does not walk around with cash, by the time it spreads from the convenience that shopping is made and realizes a cashless society today, it will have resulted.

[0003] However, the injustice using a credit card does not sever the back. For this reason, the credit card company had CAT (credit authorization terminal) which is a credit card authentication terminal and functions on a member's store as a dealings processor installed, and the crime prevention system which judges on that spot whether the card which the customer presented is used improperly is used for it.

[0004]

[Problem(s) to be Solved by the Invention] Although the nearby police and a nearby card issuer are contacted, use of the card of self-possession is prohibited and the unauthorized use by others is prevented when a card is lost or it is in a theft, he may not immediately notice having suited loss and a theft.

[0005] In that case, if the unauthorized use by the third person is made before a damage report is taken out, there are not few cases where it is unavoidable even if it has adopted the crime prevention system using CAT.

[0006] In using a card like common knowledge, a user signs a cut-form and confirms whether it is in agreement with the signature by the registered user indicated by the card by the member's store side. However, if there is no firm belief at all, since it will lead also to an damage to image of a store if it takes into consideration that it was card use by the registered user, it is not common [it] to inquire about inaccurate existence of a visitor side.

[0007] Moreover, although the system which the focus of a registered user's face is stored in a card, and checks a card user's injustice is adopted, in order to recognize the focus from a user's face, a salesclerk needs to gaze at the user's face and it leads to an damage to image of a store too.

[0008] For this reason, even if it thinks a doubtful card user, the case where card meeting woods therefore compensate damage does not sever the back that there are not few member's stores which permit use of a card.

[0009] Although his photograph is stuck on a card face and it is striving for crime prevention in the credit card company, there is a possibility that a photograph may be re-covered.

[0010] Then, although the system which transmits and collates photograph-of-his-face data with the host computer of a credit card company is known, there is a possibility that it may be forged if photograph-of-his-face data are stolen during a communication link.

[0011] This invention is made in view of the above-mentioned actual condition, and the technical problem which it is going to solve is in offering the technique in which the unauthorized use of a card can be effectively prevented rather than before.

[0012]

[Means for Solving the Problem] In order to solve the above-mentioned technical technical problem, it was made for this invention to be the following.

[0013] That is, this invention records a registered user's face focus data on the internal memory of a card. Moreover, to the host computer of a credit card company, face focus data are put in a database for the registered user judging.

[0014] Moreover, use of the card concerned displays a registered user's face on the display on CAT. Therefore, it can check in what is depended on a registered user, or the thing to depend on an inaccurate user.

[0015] If a card is furthermore read by CAT, a registered user's face focus data will be extracted. Moreover, credit use data are transmitted to the host computer of a credit card company.

[0016] When the transmitted information is in agreement with a registered user's face focus data currently recorded on the host computer, as for a host computer, a card user is specified with a registered user, and the card concerned sends the message of being used justly to the display of CAT.

[0017] in addition, the CAT itself -- or the inside-of-a-shop proper place of the near is equipped with the electronic "still" camera, and a user is photoed. And the raw photograph-of-his-face data is transmitted to a host computer, and the focus is extracted from the face of the card user who received with the host computer. It considers as the face focus data of those who use the card for this extracted focus now, and you may make it collate the data concerned with a registered user's face focus data currently recorded on the host computer.

[0018] Therefore, prevention of an unauthorized use can be strengthened.

[0019] A scramble can also be applied to said extracted face focus data so that [security] it may furthermore be raised.

[0020] Instead of face collating, you may transpose to fingerprint authentication, iris collating, etc.

[0021] It is related with truth judging employment of a host computer. Set up a fixed threshold, and when coincidence extent by collating is 0 - 60%, use of a card is refused unconditionally. 61 - 80% of case is made to perform propriety of use of a card, after performing the judgment which used other check means, such as means of communications, as a doubtful visitor, and it is also considered by 81 - 100% of case that it is made to perform judgment of succeeding in use of the regular card by the registered user. If a threshold is changed according to employment as a parameter, it is suitable. In addition, even if focus data should be stolen in the middle of the communication link between host computers, it is impossible to restore a normal user's face only by the focus. Therefore, improvement in security is expectable.

[0022]

[Embodiment of the Invention] Hereafter, the gestalt (henceforth an "operation gestalt") of operation of this invention is explained with the example of illustration.

[0023] The schematic diagram of the system configuration of goods purchase which used the credit card concerning this invention for drawing 1 is shown.

[0024] Signs 1, 2, and 3 show the host computer (center equipment) installed in the headquarters (center) of CAT, a credit card, and a credit card company, respectively.

[0025] CAT1 and the host computer 3 of a credit card company are connected through the public line or the dedicated line. And if a credit card (henceforth a "card") 2 is read by CAT1, the various information memorized by the card 2 will be transmitted to a host computer 3.

[0026] Next, the configuration of a card 2 is shown using drawing 2 and drawing 3.

[0027] The various card information (card face information) minced by the front face of a card 2 is shown in drawing 2. As card information, a registered user's (owner) ID number, a cardholder's name, the expiration date of a card, an owner's photograph of his face, etc. are indicated by the card face. Among such information, the ID number, his name, the expiration date of a card, etc. are embossing-ized, in order to aim at off-line employment.

[0028] Moreover, drawing 3 is instantiation of the information memorized by the internal memory of a card 2. As the memory storage information concerned, they are a cardholder's ID number, a cardholder's name, the expiration date of a card, and a cardholder's face image data (if there is the face image data concerned, a cardholder's face can be correctly expressed on the display of CAT1 or a host computer.). The information about the description part of a normal cardholder's face is included in face image data at least. In addition, information on the description part concerned is made face focus data. It data-izes and has memorized. Face image data is processed as a digital image. In addition, a credit card can also apply the card of the memory medium method of an IC card and others.

[0029] face image data -- the time of card issue -- a cardholder -- his face is photoed and this is data-ized. Therefore, the thing of face image data may be called photograph data. Moreover, face image data and face focus data are stored also in a host computer 3.

[0030] Next, with reference to drawing 4 and drawing 5, the relation between a credit card 2, CAT1, and a host computer 3 is explained.

[0031] In addition, the sign of (I) shown in the sign and drawing 5 of (I) - (II) which are shown in drawing 4

- (II) corresponds with the same signs, and guides the shift place of processing. For example, (I) of drawing 4 means corresponding with (I) of drawing 5, and the processing in the root concerning (I) of drawing 4 shifting to the root concerning (I) of drawing 5, and continuing by drawing 5 as it is. Such correspondence relation about a drawing is applied also in drawing 6, drawing 7, and drawing 8 and drawing 9.

[0032] The card reader section 9 as a reading means which reads the various information to which a credit card 2 has CAT1, The display 10 as a display means to display the facial photograph of a card face, to carry out various directions to the operator of CAT6, or to display various information, The ten key section 11 for inputting the shopping amount of money etc., and the function key section 12 which makes selection of a lump sum payment, payment in installments, or a (credit amount-of-money payment processing partition) about the method of payment of the goods purchased with the card, The communication circuit 13 as a transceiver means for transmitting and receiving ID information and face focus data of the user who read in the card 2 to a host computer 3, The face focus extract section 14 as a face focus extract means for a biometrics technique to extract the focus of a registered user's face from the facial photograph read in the card 2 as information by the card reader section 9, The encryption circuit 15 for enciphering data, and the power circuit 16 which supplies direct current voltage to each part which constitutes CAT3, It has the printer control section 21, the printer section 22 which prints a credit cut-form by control of the printer control section 21, or prints the credit sales total of a day, and the control section 24 which controls the whole CAT.

[0033] With the communications department 17 which carries out a credit acknowledgement job between CAT1 which has installed the enciphered various data which are transmitted from CAT1 which has installed a card issuer's host computer 3 in each store in reception and each member's store The decryption section 18 returned to the value of even if it decodes the encryption data received in the communications department 17 (it thaws), The database file section 19 which has registered said various data of a registered user beforehand, The judgment directions section 20 which carries out the comparison test of the data decoded by the data and said decryption section 18 of an appropriate person in the database file section 19, It has the threshold setting section 23 which sets up the threshold used in order that use of a card 2 may collate whether they are use by the registered user, or use by the unauthorized use person, and the CPU section 25 which is the arithmetic and program control which controls the whole host computer.

[0034] The decryption section 18 of a host computer 3 pulls out face focus data by considering an ID number as a bolster from the data of the credit card member collected beforehand, and performs the comparison with the data based on the communication link of the point obtained from CAT1 made when goods were before purchased using the same card.

[0035] It faces performing the focus collating judging of the face, and a biometrics technical judging is performed in the threshold setting section 23. Seeing an exact match 100% by the relation has unreasonableness. Therefore, it opts for a truth judging according to the level of a threshold. For example, when coincidence extent by collating is 0 - 60%, use of a card is refused unconditionally, 61 - 80% of case uses together the judgment which used the means of communications of a telephone and others as a doubtful visitor, it waits for the result, propriety of card use is performed, and 81 - 100% of case performs judgment of succeeding in the regular card use by the registered user.

[0036] in addition -- a purpose [perform / in a credit card 2, CAT1, and both host computer 3 / the continuous-line arrow head in drawing / transmission and reception of various information or an instruction] -- carrying out -- CAT1 and a host computer 3 -- the communication path which ties wiring (bus), and CAT1 and the host computer 3 which connect each configuration sections is shown. Moreover, a broken-line arrow head means that the normal data contained in the credit card 2 are memorized by the database file section 19 of CAT1, and link mutually.

[0037] If it is in this system, an arrow head 100 suggests that a card user presents the operator of CAT. The presented card 2 is read in the card reader section 9 of CAT1, and is incorporated inside CAT.

[0038] Moreover, an arrow head 104 is said communication path which ties CAT1 and a host computer 3, and CAT1 and a host computer 3 show that it is connected through a public line or a dedicated line by each means of communications (in the case of CAT1, it is a communication circuit 13, and, in the case of a host computer 3, he is the communications department 17.).

[0039] The data chosen in the function key sections 12, such as data, such as the shopping amount of money inputted in the ID number and a cardholder's name which are contained in the credit card 2 read in the card reader section 9, the expiration date of a card, a cardholder's photograph of his face, the data of the face image data of the owner concerned, and the ten key input section 11, and a credit amount-of-money payment processing partition, are sent to a control section 24 (arrow-head 106,108,110 reference).

[0040] The photograph data which are an owner's face image data among the information sent to the control

section 24 are sent to the encryption (arrow-head 112 reference) circuit 15 via the face focus extract section 14 (arrow-head 114 reference).

[0041] The data enciphered in the encryption circuit 15 and the input data based on the ten key section 11 and the function key section 12 are sent to a communication circuit 13 via a communication circuit 13 (arrow-head 116,117 reference), and are transmitted to the communications department 17 of a host computer 3 after that (arrow-head 104 reference).

[0042] The key for enciphering can be changed from a host computer 3 side. Moreover, CAT1 should suit a theft, and even if it tries in order that a larcenist may extract the focus about a registered user's face from photograph data, face focus data are obtained. It enables it to have changed the key of an encryption circuit irregularly furthermore, and even if it decodes, the algorithm of encryption etc. will change. For this reason, data transmission of the same key cannot be carried out from CAT1 currently installed in the store.

[0043] Moreover, based on the various data sent to the control section 24, required information is displayed on a display 10.

[0044] The data transmitted from CAT1 are sent to the decryption section 18 via the communications department 17 (arrow-head 104,126 reference). And it is transmitted to the CPU section 25, and after the data decoded by the decryption section 18 perform required data processing there, they are sent to the communications department 17, the threshold setting section 23, and the judgment directions section 20 (arrow heads 128, 130, and 134, 136 reference). Moreover, between the CPU section 25 and the database file section 19, an exchange of data is performed mutually (arrow-head 132,138 reference).

[0045] The judgment result by the judgment directions section 20 is sent to the communications department 17 (arrow-head 140 reference), and is sent to the communication circuit 13 of CAT1 through a public line or a dedicated line after that (arrow-head 140,104 reference).

[0046] As a result of performing for example, a card user's blacklist check, the expiration date check of a card, etc., expression of the photograph data of the contents of a judgment with just card use or a registered user can be illustrated as said judgment result with a host computer 3.

[0047] The judgment result of having gone into CAT1 via the communication circuit 13 is displayed on a display 10 via a control section 24. The contents displayed on the display 10 show whether an operator is effective card use by the registered user.

[0048] And when it becomes clear that it is effective card use by the registered user and a check is able to be taken about the effectiveness of a card 2, CAT1 operates the printer section 22 via the printer control section 21 by the control section 24, and prints a cut-form (arrow-head 118,120 reference).

[0049] Next, the flow of this system is explained with reference to the flow chart of drawing 6 and drawing 7.

[0050] This system consists of step 101 described below - step 120. In addition, a step is written using S101 and Notation S.

[0051] In S101, if the customer who wants to perform shopping etc. using a card 2 tells the salesclerk of a member's store that, a salesclerk will perform initiation of the procedure of credit sales acknowledgement according a card 2 to reception and CAT1 as an operator from the customer who is a card user.

[0052] In S102, the photograph with which the salesclerk who is an operator is displayed on the card 2, and a card user inspect visually first whether you are the same people. And if it is judged as the same people (affirmation judging), it will progress to S103, and if it is judged as another person (negative judging), it will progress to S104. A flow chart shows performing a judgment with the notation called "card photograph = he face ?" which used *****.

[0053] In S103, a salesclerk asks a customer about whether what we do with the proceeds frame which is the price of goods, or its number of payments, and inputs the contents by actuation of the ten key input section 11 or the function key section 12.

[0054] In S105, a credit card 2 is read in the card reader section 9, and said various information which a card 2 has is incorporated by CAT1.

[0055] In S106, the face focus data of the registered user who memorized to the internal memory of a card 2 are read, and a registered user's face is displayed on the display 10 of CAT1.

[0056] In S109, face focus data are transmitted to a host computer 3 via the communications department 17 of a host computer 3.

[0057] In S110, it judges with a host computer 3.

[0058] In S111, the judgment result of a host computer 3 is transmitted to CAT1 via the communications department 17 of a host computer 3.

[0059] In S112, the judgment result of a host computer 3 is displayed on the display 10 of CAT1 via the

communications department 17 of a host computer 3. A judgment result is determined by what coincidence extent by said threshold is. When coincidence extent is 0 - 60%, use of a card is refused unconditionally. That is, a judgment serves as NG. When coincidence extent is except 0 - 60%, it was judged that use by the registered user was made, or it means that which or judgment of being unknown was made.

[0060] When it progresses to S113 when a negative judging is carried out by S112, and an affirmation judging is carried out, it progresses to S104.

[0061] In S113, coincidence extent judges whether it is 61 - 80% on the assumption that it is not the case where coincidence extent is 0 - 60%. When it progresses to S115 when a negative judging is carried out by S113, and an affirmation judging is carried out, it progresses to S116. In S113, "judgment gray ?" is written. [these contents]

[0062] In S115, when coincidence extent is not 0 - 80%, namely, since it is the case where coincidence extent is 81 - 100%, it is judged with use of the card by the registered user, and dealings are materialized.

[0063] In S117, the printer section 22 is operated by control of the printer control section 21, and a credit cut-form is published.

[0064] The sign to a cut-form is requested from the card user who is a customer, and dealings by this system are ended by S120 S118. In addition, as a proof of dealings having been made, I have a card user enter the sign of the same gestalt as the sign as which the card rear face is filled in in a cut-form, and dealings are materialized with this to him. It acts to the interior of CAT as the tongue king of the dealings data concerned. And it is transmitted to a host computer 3 as dealings tolan rucksack SHON data into the assignment time amount in the time of closing, or business hours.

[0065] Since the card user is unknown at S116 which progresses when an affirmation judging is carried out by S113 whether you are a registered user, not the judgment by the computer but the judgment for the second time by people is performed. "Dealings owner man reconfirmation" of these contents is written. It connects to performing this judgment for example, in the telephone center of a credit card company by S119.

[0066] The degree of S119 progresses to S114. In S114, when it progresses to S115 when "judging judges whether it is gray and carries out a negative judging like S113, and an affirmation judging is carried out, it progresses to S104.

[0067] in addition, the CAT itself -- or the inside-of-a-shop proper place of the near is equipped with the electronic "still" camera, and a user is photoed. And raw photograph-of-his-face data are transmitted to a host computer 3 from CAT1, a host computer 3 extracts the focus of a face, and you may make it compare with the face focus data stored in the host computer 3.

[0068] Next, the operation effectiveness of the unauthorized use prevention technique of a credit card in which this system of such a configuration was used is described.

[0069] If it is in the <unjust prevention effectiveness of ** first> book system, in addition to data, such as ID indispensable to the conventional credit use, the photograph data of a registered user's face are memorized in a card 2. And with a host computer 3, the face focus data for a registered user judging which do not become clear at all are separately extracted from the photograph data from on a card face. Moreover, face focus data are digitized and are memorized by the database file section 19 of a host computer 3 together with the individual humanity news of said ID and others.

[0070] Therefore, if the user of normal uses a card 2, the photograph of his face based on the photograph data read in the internal memory of a card 2 to the display 10 on CAT1 expresses, and an operator can check the existence of the card use by the registered user visually. Consequently, the unjust prevention effectiveness of a card increases.

[0071] The photograph data of the <unjust prevention effectiveness of ** second> card 2 are read by CAT1, and the focus is extracted. him of whether personal data, such as not only the face focus data (it is not the whole face image data) enciphered by the encryption circuit 15 of the CAT1 interior but said ID, are transmitted to a host computer 3, and the extracted data are a registered user -- collating is made.

[0072] In addition, even if focus data should be stolen in the middle of the communication link between host computers 3, it is impossible to restore a normal user's face only by the focus. Therefore, improvement in security is expectable.

[0073] And if the various data transmitted to a registered user's face image data and host computer 3 which are memorized by the host computer 3 are in agreement, a host computer 3 will judge with a user being a registered user, and will display the message of the contents that use of a card 2 is possible etc. on the display 10 of CAT1.

[0074] only him whom an outsider cannot touch with the data currently kept by the host computer 3 -- the

unjust prevention effectiveness by being a check key can be planned.

[0075] the <unjust prevention effectiveness of ** third> card 2 -- a theft -- it is -- the photograph of his face of a card 2 -- a pickpocket -- the face of the registered user based on the photograph data memorized by the display 10 of CAT1 also as substitute **** at the internal memory of a card 2 is displayed. In this case, the face expressed based on the photograph data memorized by the photograph of his face of a card 2 and the internal memory of a card 2 is inharmonious. Therefore, unless the data memorized by the internal memory of a card 2 are altered, the operator of CAT1 can recognize easily whether it is card use by the registered user. Therefore, an unauthorized use becomes very difficult.

[0076] Since it differs from a registered user's photograph data memorized by the host computer 3 even if it substitutes the photograph of his face of the stolen card 2 secretly by manipulation of the <unjust prevention effectiveness of ** fourth> high technique or also replaces the photograph data memorized to the internal memory of a card 2, the unauthorized use of a card can be revealed easily.

[0077] The theft of not the <unjust prevention effectiveness of ** fifth> card but CAT1 is carried out, a stolen card is ground, and an unauthorized use is impossible unless a registered user's photograph data memorized by the host computer 3 will be altered, even if the photograph data of those who are going to use improperly to the internal memory are memorized.

[0078] Since security is raised by the <unjust prevention effectiveness of ** sixth> pan, applying a scramble to the face focus data extracted through the encryption circuit 15 at the time of face data reading on a card 2 is also considered.

[0079] In this case, the focus enciphered since the algorithm of encryption was changed irregularly cannot specify the original focus of a basis. Therefore, the unauthorized use of a card can be prevented effectively.

[0080] (Modification) You may make it collate with a fingerprint instead of collating with a facial photograph.

[0081] In this case, a registered user's fingerprint is dealt with as data (following "fingerprint data") instead of photograph data, fingerprint data are decoded, and it is made to compare with the fingerprint data of the registered user memorized to the host computer. Therefore, the point of memorizing fingerprint data to the internal memory of a card 2, the point which becomes the fingerprint focus extract section which the face focus extract section 14 of CAT1 does not illustrate, and the point that a registered user's fingerprint data are memorized by the database file section 19 of a host computer 3 are different from the case where photograph data are used, on a system.

[0082] Moreover, drawing 8 and drawing 9 show the flow chart in the case of performing fingerprint authentication.

[0083] The points that this flow chart is different from the flow chart of drawing 6 and drawing 7 are the point that S106, S107, S108, and S112 concerning the flow chart of drawing 6 and drawing 7 were changed into S206, S207, S208, and S212, respectively, and a point that the processing sequence of S206 and S207 corresponding to S106 and S107 gets mixed up, respectively. Therefore, the same sign is given to the same part as the flow chart of drawing 6 and drawing 7, and explanation is omitted.

[0084] In drawing 8, the fingerprint data memorized to the internal memory of a card 2 judge whether it is a registered user's fingerprint by S207 which progresses to the degree of S105. When it progresses to S206 when an affirmation judging is carried out, and a negative judging is carried out, it progresses to S104.

[0085] said judgment -- ***** -- using -- " -- the fingerprint data = book human finger in a card -- it is written as crest ?."

[0086] In S206 which progresses when an affirmation judging is carried out by S207, the fingerprint data of the registered user who memorized to the internal memory of a card 2 are read, and a registered user's fingerprint authentication displays a proper purport on the display 10 of CAT1.

[0087] In S208, the fingerprint description data which extracted the fingerprint data memorized by the card 2 concerned by said fingerprint focus extract section, and were extracted by the encryption circuit after that are enciphered.

[0088] In S212, the judgment result of a host computer 3 is displayed on the display 10 of CAT1 via the communications department 17 of a host computer 3. It is the same as the case of face focus data to determine a judgment result by what coincidence extent by the threshold is. When coincidence extent is 0 - 60%, use of a card is refused unconditionally. That is, a judgment serves as NG. When coincidence extent is except 0 - 60%, it was judged that use by the registered user was made, or it means that which or judgment of being unknown was made.

[0089] When it progresses to S113 when a negative judging is carried out by S212, and an affirmation judging is carried out, it progresses to S104.

[0090] In addition, it is possible to also apply well-known iris collating instead of face focus data or fingerprint data.

[0091] (Application) The case of being as follows can be considered as an application of application techniques, such as face focus data and fingerprint data.

[0092] The identification card which memorized the photograph of his face to the internal memory is published for a guard. And several place card processing terminal is installed in the proper place of a round place so that it may turn out whether the guard is carrying out regular business. And if a guard goes round in said proper place, it will judge whether the guard is carrying out regular business by making a card read.

[0093] Moreover, the use as an entrance storage recorder to the safe-deposit box of a bank is also considered.

[0094] Furthermore, application to a POS accounting data process can perform credit processing at two or more goods counters which can be set, for example to a recreation center etc. by performing his face image data etc. as a key.

[0095] him in the case of attaching to the room in the restaurant in a hotel etc., and selling and carrying out to it further again -- applying face collating etc. to specification is also considered.

[0096] In addition, it can use also for tariff settlement of accounts to a pool. Also in this case, all the credit amount of money is memorized to POS by using face image data etc. as a key.

[0097] furthermore, him in a video rental shop or a rental car office -- use broad as collating POS is also considered.

[0098] Moreover, since theft prevention of a car is aimed at, it can use also as a time recorder for operator specification in a parking lot.

[0099]

[Effect of the Invention] As mentioned above, as explained, according to this invention, the unauthorized use of a credit card can be prevented more effectively than a Prior art.

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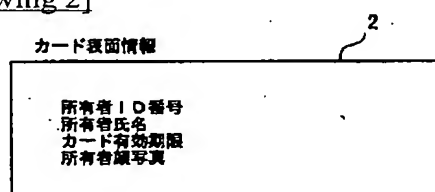
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DRAWINGS

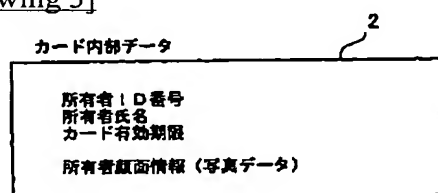
[Drawing 1]



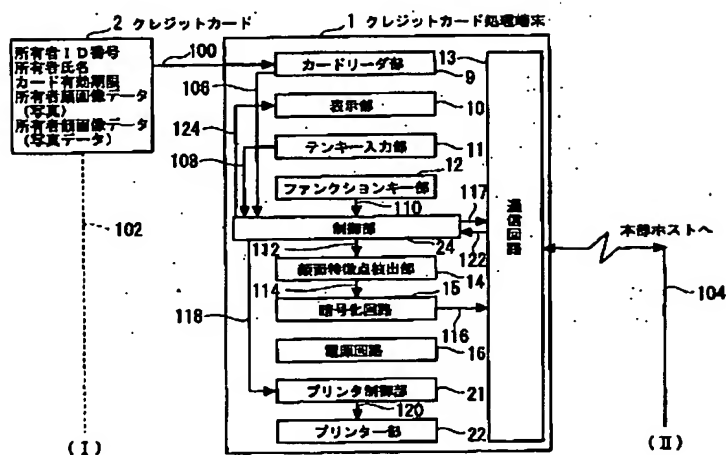
[Drawing 2]



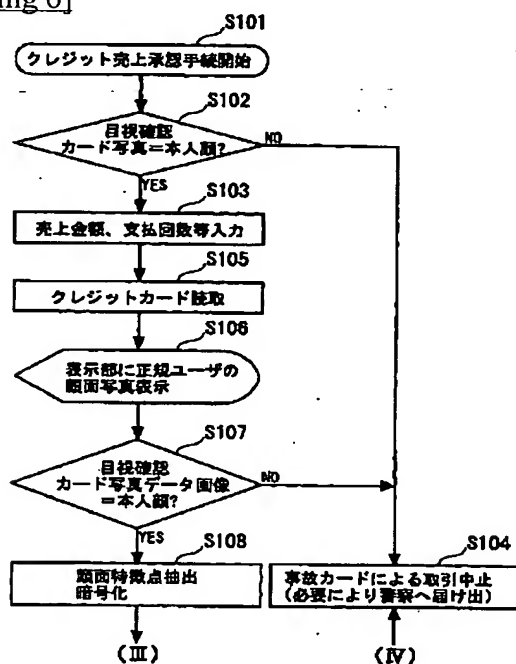
[Drawing 3]



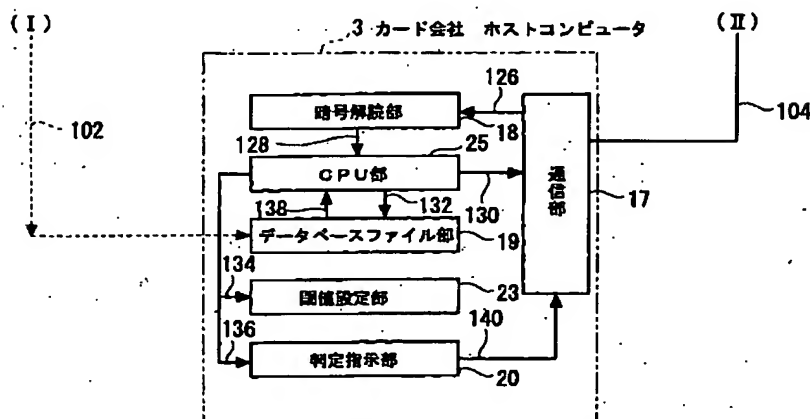
[Drawing 4]



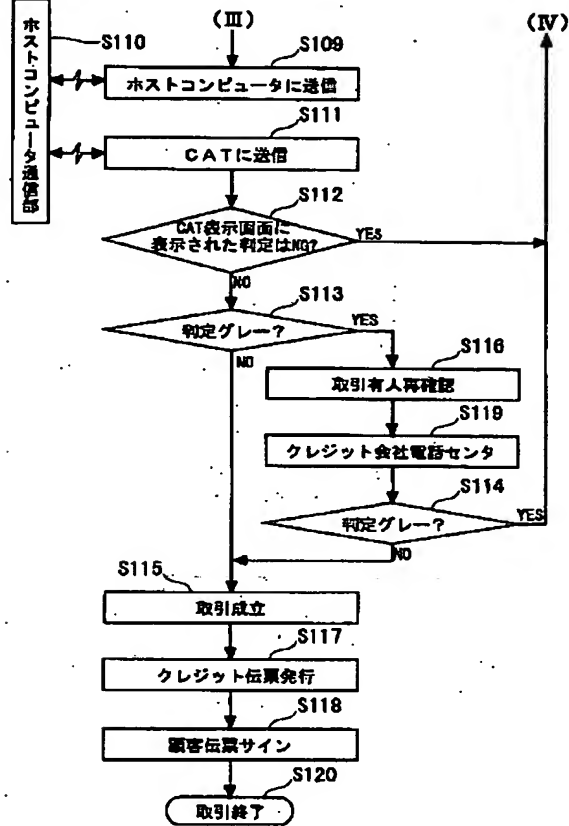
[Drawing 6]



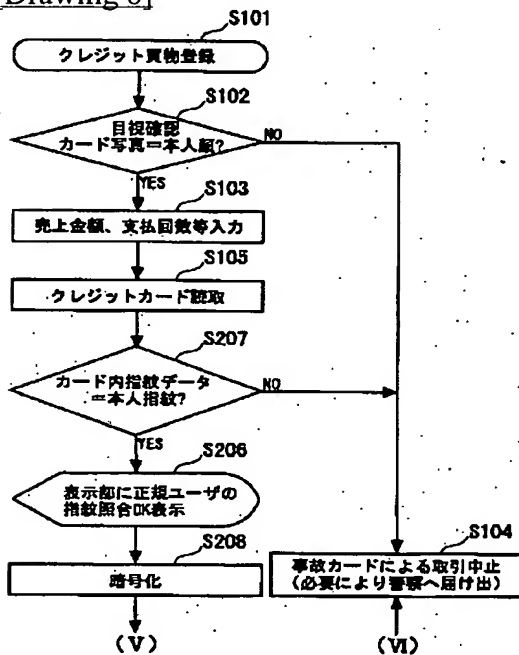
[Drawing 5]



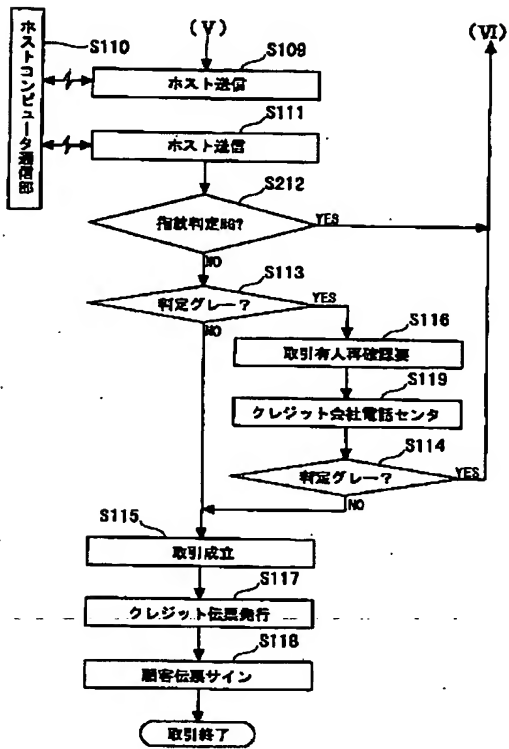
[Drawing 7]



[Drawing 8]



[Drawing 9]



[Translation done.]